

REMARKS/ARGUMENTS

This case has been reviewed and analyzed in view of the Official Action dated 17 June 2004. Responsive to the rejections made by the Examiner in the outstanding Official Action, Claims 1, 17, and 20 have now been amended and Claims 2, 18, and 25 have been canceled from this case in order to more clearly clarify the inventive concept of the Applicant.

The Examiner has rejected Claims 1-33 under the Judicially Created Doctrine of Double Patenting over Claims 1-13 of U.S. Patent #6,583,381 and Claims 1-21 of U.S. Patent #6,649,861 since the Claims, if allowed, would improperly extend the “right to exclude” already granted in the Patent. Terminal Disclaimers to Obviate a Double Patenting Rejection over a Prior Patent are attached as an Appendix to this Amendment, along with and the appropriate Terminal Disclaimer fees under 37 C.F.R. § 1.20(d).

Prior to a further discussion of the Examiner’s objections and rejections made in the outstanding Official Action, it is believed that it may be beneficial to briefly review the subject Patent Application system in light of the inventive concept of the Applicant.

The subject Patent Application system is directed to a patterned surface cleaning system and method used in miniature structures manufacturing processes. As shown in Fig. 1 of the subject Patent Application Drawings, the system includes a laser 12 which generates an energy beam (in this case a laser beam) 13. The energy beam 13 impinges

upon substrate 11. A material carrier element 14 is provided having an upper surface 17 with a deposition layer 16 formed on a lower end of the surface 17. In a first cleaning mode, the laser beam 13 may strike the substrate 11, unimpeded, for cleaning the surface of the substrate 11. During a material transfer mode of operation, the material carrier element 14 is positioned within gap 15 so that the laser beam 13 strikes the material carrier element 14 and allows for deposition of the deposition material 16 upon the substrate 11.

The Examiner has rejected Claims 1-33 under 35 U.S.C. § 102(b) as being anticipated by the Hosoya Patent #5,319,183. It is the Examiner's contention that all elements of Claims 1-33, as originally filed, are taught by the Hosoya reference.

The Hosoya reference is directed to a method and apparatus for cutting patterns of printed wiring boards and a method and apparatus for cleaning printed wiring boards. As shown in Fig. 4 of the Patent Drawings, an XY stage 1, which is a table for moving a printed wiring board, carries a printed wiring board PT thereon and moves along a two-dimensional plane. A laser beam irradiation apparatus 2 emits a laser beam LB to a pattern spot to be cut on the printed wiring board PT placed on the XY stage 1. To this end, the laser beam irradiation apparatus 2 comprises a laser oscillator 21 and a laser beam masking apparatus 22, and is connected to a laser controller 23 and a mask size controller 24. The laser beam masking apparatus 22 adjusts the range of irradiation of the laser beam LB from the laser oscillator 21 by changing the opening length L and width W

thereof and comprises two pairs of masking plates 22-5, 22-6, and 22-7, 22-8, as shown in Fig. 5(a).

The element 22 is a laser beam masking apparatus, and is fully described in Column 6, Lines 17-28 of the prior art Patent. The laser beam masking apparatus 22 acts as a standard mask and is, essentially, an adjustable aperture allowing for the shaping of the laser beam passing through the masking apparatus. The mask allows for the shaping of the cut or wire pattern being formed in the circuit board.

Element 22 is only a mask and does not provide for any sort of laser deposition.

In contradistinction, the material carrier element 14, shown in Fig. 1 of the subject Patent Application Drawings, includes a surface 17 for carrying a deposition material formed as the deposition layer 16. The system of the subject Patent Application provides for both a material removal mode of operation, which is, essentially, a cleaning mode when the laser beam 13 may impinge upon substrate 11; and further a material transfer mode of operation. In the material transfer mode of operation, the laser beam 13 impinges upon the deposition layer 16, thus creating a plume or stream of deposition material which is then deposited upon substrate 11. This allows for the building or construction of patterns on the substrate 11 using deposition material 16.

The Hosoya reference does not provide for any sort of laser deposition. It merely provides for a laser beam impinging upon a circuit board, and passing through a mask having an aperture. The mask does not hold any sort of deposition material thereon.

Thus, the Hosoya reference does not provide for: "...providing a material carrier element having a deposition layer supported thereon and facing said substrate...thereby transferring a deposition material contained in said deposition layer on said surface of said substrate...", as is clearly provided by newly-amended Independent Claim 1. Further, the Hosoya reference does not provide for: "...providing a material carrier element having a deposition layer supported thereon and facing said substrate...thereby depositing a deposition material contained in said deposition layer onto said substrate surface at locations therein...", as is further provided by newly-amended Independent Claim 17. Additionally, the Hosoya reference does not provide for: "...a material carrier element...including a deposition layer supported thereon and facing said substrate...", as is further provided by newly-amended Independent Claim 20.

Thus, based upon newly-amended Independent Claims 1, 17, and 20, it is not believed that the subject Patent Application has been anticipated by, or made obvious by, the Hosoya reference, when Independent Claim 1 is carefully reviewed.

It is now believed that the remaining Claims 3-16, 19, 21-24, 26-33, show patentable distinction over the prior art cited by the Examiner for at least the same reasons as those previously discussed for Independent Claims 1, 17, and 20.

The remaining references cited by the Examiner, but not used in the rejection, have been reviewed, but are believed to be further removed when patentable distinctions are taken into account than those cited by the Examiner in the rejection.

MR2799-3

Application Serial #09/744,172

Responsive to Office Action of 17 June 2004

It is now believed that the subject Patent Application has been placed in condition for allowance, and such action is respectfully requested.

Respectfully submitted,

FOR: ROSENBERG, KLEIN & LEE

A handwritten signature in cursive script, appearing to read "Morton J. Rosenberg".

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Dated: 9/15/04

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